

**What is claimed is:**

1       1. A method for introducing micro-volume liquid  
2 comprising:

3               providing a multi-channel inkjet print head  
4                including a cartridge and a nozzle plate with a  
5                plurality of nozzles, wherein the cartridge  
6                includes a plurality of channels, communicating  
7                with the nozzles on the nozzle plate, and a  
8                plurality of openings located at the channels;  
9                contacting the nozzle plate with a buffer;  
10              introducing the buffer into the channels via the  
11               nozzles by providing a pressure; and  
12              introducing reagents into the channels via the  
13               openings.

1       2. The method as claimed in claim 1, wherein the  
2 buffer excludes biomolecules therein.

1       3. The method as claimed in claim 1, further  
2 comprising:

3               after introducing the buffer into the channels,  
4               removing part of the buffer from the channels.

1       4. The method as claimed in claim 3, wherein the  
2 volume of the removed buffer is not less than the volume  
3 of the introduced reagents.

1       5. The method as claimed in claim 1, wherein the  
2 pressure is positive so that the buffer is pushed into  
3 the channels via the nozzles.

1       6. The method as claimed in claim 1, wherein the  
2       pressure is negative so that the buffer is drawn into the  
3       channels via the openings.

1       7. The method as claimed in claim 6, wherein the  
2       negative pressure is generated by vacuuming the openings.

1       8. The method as claimed in claim 1, wherein the  
2       reagents include biomolecules therein, and the  
3       biomolecules are oligonucleotides, peptides, proteins, or  
4       derivatives thereof.

1       9. The method as claimed in claim 1, wherein the  
2       reagents are introduced into the channels by pipettes.

1       10. An apparatus for introducing micro-volume  
2       liquid comprising:

3       a multi-channel inkjet print head including  
4       cartridge and a nozzle plate with a plurality  
5       of nozzles, wherein the cartridge includes a  
6       plurality of channels, communicating with the  
7       nozzles on the nozzle plate, and a plurality of  
8       openings located at the channels;

9       a container for receiving a buffer, wherein the  
10       buffer and the nozzle plate are in contact;

11       a pressure supply for providing pressure to the  
12       multi-channel inkjet print head so that the  
13       buffer is introduced into the channels; and

14       an injector, disposed in the channels, for receiving  
15       a reagent therein and introducing the reagent  
16       into the channels via the openings.

1           11. The apparatus as claimed in claim 10, further  
2 comprising:

3           an absorber, disposed in the channels, for removing  
4           a predetermined amount of the buffer from the  
5           channels.

1           12. The apparatus as claimed in claim 10, wherein  
2 the pressure supply communicates with the container, and  
3 provides a positive pressure to the container so that the  
4 buffer is pushed into the channels.

1           13. The apparatus as claimed in claim 10, wherein  
2 the pressure supply communicates with the openings, and  
3 provides a negative pressure to the channels so that the  
4 buffer is drawn into the channels.

1           14. The apparatus as claimed in claim 10, wherein  
2 the reagents includes biomolecules therein, and the  
3 biomolecules are oligonucleotides, peptides, proteins, or  
4 derivatives thereof.

1           15. The apparatus as claimed in claim 10, wherein  
2 the buffer excludes the biomolecules.

1           16. The apparatus as claimed in claim 10, wherein  
2 the injector is a pipette.